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ABSTRACT

The material presented in this course guide is designed to aid administrators in setting up and administering the emergency medical technician (EMT) dispatcher course. Descriptions of the overall objectives and scope of the course are presented, including behavioral objectives for eleven units of instruction covering the following emergency medical services (EMS) system functions: receive and process calls for EMS assistance, dispatch and coordinate EMS resources, relay medical information, and coordinate with public safety services. Suggestions for planning the course and organizing course content are provided and include descriptions of instructor qualifications, student qualifications, class size considerations, training resources, and scheduling considerations. A section is also devoted to localizing or customizing the training materials. A final section provides guidelines for monitoring/evaluating the course. (BL)

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U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

DOT HS 802 137

Training Program For
Emergency Medical Technician:

1 DISPATCHER

Course Guide

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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Preface

The goal of the National Highway Traffic Safety Administration (NHTSA), Department of Transportation, pursuant to the Highway Safety Act of 1966 and the Emergency Medical Services Standard II, has been to develop, upgrade and professionalize the pre-hospital emergency medical care system,enhance its life-sustaining quality, encourage its establishment where it does not now exist, and achieve complete system development. This required giving attention to the four major components or objectives of this system, namely administration, personnel, equipment and communications. Communications is the means by which the system becomes a cohesive, efficiently functioning entity providing prompt response and optimum care to the emergency victim. To be fully complete and contributive, it must also enhance the entry of the victim into the system. For this reason the dispatcher function is being emphasized and enhanced through training to add an additional dimension to the communications need for emergency identification, reporting and response.

Consequently, the Administration has devoted special effort to plan, develop, and provide the communications component or sub-system structure necessary to achieve the above objectives. This dispatcher training course is a part of the total planned program of emergency service communications development. It is the recommendation of the Administration that it receive extensive use and further enhance the care of the emergency victim as well as aid the communications needs of Highway Safety Standards 15, "Police Traffic Services" (PTS), and 16, "Debris Hazard Control and Cleanup" (DHC & C). This course is also being identified with the National Emergency Aid Radio (NEAR) system of the total DOT EMS communications effort.

Foreword

The Highway Safety Act of 1966 recognized the importance of emergency services and required that a standard be developed to cover this aspect of highway safety. As a result, Highway Safety Program Standard No. 11—Emergency Medical Services, was promulgated on 27 June 1967. The standard identified eight specific requirements of a minimal program, the first of which states: "There are training, licensing, and related requirements (as appropriate) for ambulance and rescue vehicle operators, attendants, drivers, and dispatchers."

In response to this requirement the National Highway Traffic Safety Administration (NHTSA) has supported the development of training materials for Emergency Medical Services (EMS) functions. Already prepared are a Basic and an Advanced Training Progam for Emergency Medical Technicians—Ambulance. In response to the requirement for the training of dispatchers, NHTSA published a brief Instructor's Guide for dispatcher training in 1972. Experience resulting from that 1972 publication demonstrated the need to expand and amplify the original guide. Thus, further development of training materials and the preparation of a job-related, standardized curriculum package for the training of dispatchers was undertaken.

The dispatcher occupies a critical position within Emergency Medical Services. He serves as the primary point of contact with the public being served. He provides a channel for communications among elements of the EMS system and between EMS elements and other public safety units. As noted in The Associated Public-Safety Communications Officers, Inc. Standard Operating Procedure Manual,[1] the adoption of standardized methods and signals ". . . would mean a substantial increase in Public Safety departmental efficiency and interdepartmental cooperation." By communicating effectively the dispatcher can significantly reduce the frequency of death and the severity of residual disabilities resulting from accidents.

Considering the importance of the dispatcher's functions, one would expect him to be well trained—in the fashion of the air-traffic controller. Comprehensive training programs have been developed for several important elements of the EMS, including Crash Injury Management and Ambulance Emergency Medical Technicians. Yet the dispatcher, a necessary interface between these and other elements of the system, is still often trained on the job by the "buddy system" or by listening to a supervisor overview the job. Undoubtedly this situation degrades the performance of the entire EMS system.

Several unfortunate consequences result from the prevalent informal nature of dispatcher training:

1. The dispatcher is slow in reaching the accepted level of job mastery.

2. The dispatcher does not reach as high a level of job mastery as would be possible with more structured training.

3. The procedures that are learned on the job may be far from optimal. Their quality depends upon the talents of the models being emulated.

4. The range of situations the dispatcher has encountered or has been told about may be too small to enable him to cope with the less frequent and more complex types of emergencies.

This EMT training course was develcped in response to the urgent need for a job-related, standardized package of instruction for the emergency medical dispatcher.

[1]The Associated Public-Safety Communications Officers, Inc. *Public Safety Communications Standard Operating Procedure Manual*. New Smyrna Beach, Florida: Author, November 1974. (Revised Edition)

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The training program described in this *Course Guide* is aimed at preparing dispatchers to accomplish the required telecommunications functions. The four EMS Communication System functions are presented below.

Figure 1. EMS Communication System Functions

Function A: Receive and Process Calls for EMS Assistance.

To receive and record calls for EMS assistance; to select appropriate course of action for each call.

Function B: Dispatch and Coordinate EMS Resources.

To dispatch Emergency Medical Service resources to the location of an emergency. To coordinate the movements of emergency medical vehicles while enroute to the scene, to a medical facility, and back to the base station.

Function C: Relay Medical Information.

To provide a telecommunication channel between appropriate medical facilities and Emergency Medical Technicians, or fire, police, and rescue workers, or private citizens. The channel may consist of telephone, radio, or biomedical telemetry.

Function D: Coordinate With Public Safety Services.

To provide a telecommunication channel between public safety units (fire, police, rescue) and elements of the Emergency Medical System, in order to facilitate the coordination of services such as traffic control, escort, fire control, and extrication.

The purpose of this *Course Guide* is to aid administrators in setting up and administering the EMT Dispatcher course. It contains a description of the overall objectives and scope of the course. The *Course Guide* also provides suggestions for organizing the content of the course. Included in these planning considerations are a statement of instructor qualifications; student qualifications; class size considerations; training resources, i.e., facilities, equipment and supplies, and scheduling considerations. Because the EMT dispatching functions vary in their application from locale to locale, a section of this document is devoted to localizing or customizing the training materials. The final section of this *Course Guide* provides guidelines for monitoring/evaluating the course, since a major administrative responsibility is to implement quality control measures to insure the consistent effectiveness of the course.

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The *Course Guide* outlines the content and structure for a job-relevant EMT dispatcher training program and assists the course administrator in organizing, initiating, and evaluating the course. However, actual conduct of the course requires additional support material.

First, a basic teaching reference, *Instructor Lesson Plans*, is required to assist the instructor in conducting the course. The lesson plans should include a listing of the course objectives, textual content, practice exercises, and review questions for each of the units. It should be organized to structure the instructor's presentation along lines which adhere to effective pedagogical principles (i.e., keep the students active, provide remedial assistance, etc.).

Secondly, the trainees will require a *Student Study Guide* containing the same specifications of student behavioral objectives as those in the *Instructor Lesson Plans*. The study guide should be a working document (containing necessary exhibits, etc.) that is used during training for taking notes; it should also serve as a reference document during the trainee's early weeks on the job. The guide should be supplemented by a standard text[2] containing detailed supporting information.

[2] The Associated Public-Safety Communications Officers, Inc. *Public Safety Communications Standard Operating Procedure Manual*. New Smyrna Beach, Florida: Author, November 1974. (Revised Edition)

This course has been developed to prepare individual Emergency Medical Technicians (EMTs) to operate a telecommunications base station for the purpose of allocating community emergency services and resources in response to requests from the general public or from public safety units. It is keyed specifically to the EMT dispatcher job functions.

Part I of the course covers the basic skills and knowledge needed for performing the general duties required of any dispatcher. Part II covers the specific skills and knowledge required for allocating appropriate emergency medical resources to the scene of each emergency. Although there are no prerequisites for students entering Part I, the Part II materials assume students have completed Part I (or equivalent) *and* the 81-hour Basic Emergency Medical Technician—Ambulance course prepared by the National Highway Traffic Safety Administration. (The topics covered by the Basic EMT course are listed in Appendix A.)

Thus, students completing Part II will be specialists qualified to handle basic dispatching functions *as well as* emergency medical dispatching functions. They will not be specifically prepared, however, for handling other specialty dispatcher functions, such as police or fire dispatching, although many of the basic dispatching functions are equivalent across specialties.

The total course consists of eleven units of instruction keyed to provide the necessary knowledge and skills and to accomplish the EMT dispatcher functions. The Part I Basic Dispatcher Materials consist of the following five units:

- I-A Introduction to Dispatcher Roles and Responsibilities
- I-B Telecommunications Equipment
- I-C Operating Procedures and Techniques
- I-D Eliciting Information from Callers
- I-E Practice

The Part II EMT Specialist materials consist of the following six units.

- II-A EMT Dispatcher Roles and Responsibilities
- II-B Capabilities and Limitations of Local Medical Facilities
- II-C Allocation of Resources
- II-D Providing Emergency Care Instructions
- II-E Practice
- II-F Disaster Procedures

Figure 2 on the following pages lists the specific objectives for each unit of Parts I and II of the course.

Figure 2. Course Objectives

PART I BASIC DISPATCHER

Basic A

Introduction to Dispatcher Roles and Responsibilities

*By the end of this unit, the trainee, given a list of roles and responsibilities, will be able to distinguish between those which are *and are not* appropriate for public safety dispatchers.

Basic B

Telecommunications Equipment

By the end of this unit, the trainee:

1. Given photographs or drawings of telecommunications consoles, will be able to identify correctly all major controls and displays.

*2. Given the actual telecommunications equipment, will correctly be able to reach other base stations by radio communications and by land line communications.

3. Given the actual telecommunications equipment, will correctly demonstrate the procedure for patching together a telephone caller with a hospital emergency room (if equipment permits), and patching together an incoming call from an ambulance with a hospital emergency room (if equipment permits).

4. Given several statements describing apparent equipment malfunctions, will be able to state:

   a. Whether the source of the problem lies in the transmitter/receiver.

   b. Who should be notified.

   c. What information should be provided.

*Objectives marked with an asterisk should not be deleted in customizing the course.

Figure 2

Basic C

Operation Procedures and Techniques

By the end of this unit, the trainee:

1. Given five telephone numbers, will be able to point out the location of the telephones on a map of the area.

2. Given five addresses, will be able to point out their locations on a map of the area.

3. Given a set of reports that different emergency vehicles in this area are in service, out of service, responding to an emergency, and have completed an assignment, will indicate the appropriate action to keep track of their availability status.

4. Will be able to state three provisions of FCC regulations that apply to the operation of a transmitter; three things the FCC prohibits.

*5. Given the Associated Public-Safety Communications Officers, Inc. list of ten "telephone techniques," will be able to state the consequences of failing to use each technique.

*6. Given an opportunity to practice good telephone techniques, will demonstrate mastery of the techniques.

*7. Given a list of messages to read over the telephone, will read the messages in such a way that the party at the other end of the line can copy them without error.

8. Given the International Phonetic Alphabet will be able to transmit five difficult names over the telephone in such a way that the other party can copy them without error.

9. Given a list of the locally used 10-codes and their meanings, and transmissions employing each of the 10-codes, will be able to write a correct translation of each transmission.

10. Given a list of the locally used 10-codes and their meanings, and a list of statements to be transmitted, will be able to construct a correctly phrased transmission for each of the statements to be transmitted, using 10-codes.

*11. Given a list of abbreviations and jargon words and phrases in common local telecommunications usage, will be able to translate each one (for example, D.A.V. = disabled vehicle).

*Objectives marked with an asterisk should not be deleted in customizing the course.

Figure 2

12. Given the opportunity of receiving several incoming calls simultaneously, will demonstrate correct procedures.

13. Given problems describing instances in which two or more callers provide conflicting information, will be able to state an appropriate course of action for each problem.

Basic D

Eliciting Information From Callers

By the end of this unit, the trainee:

1. Given simulated calls reporting emergencies, will be able to elicit the information necessary to be able to allocate appropriate resources to the scene. The information will be elicited in order of importance.

2. Will be able to describe several (two or three) practices which betray excitement and, therefore, should be avoided in speaking to callers.

Basic E

Practice

By the end of this unit, the trainee:

*1. Given a list of information to be recorded, will correctly make the entries for each form or log to be mastered.

2. Will be able to demonstrate achievement of all Basic objectives.

*Objectives marked with an asterisk should not be deleted in customizing the course.

Figure 2

PART II EMT DISPATCHER

EMT Specialist A

EMT Dispatcher Roles and Responsibilities

By the end of this unit, the trainee:

*1. Will be able to state correctly three primary functions accomplished by the EMT Dispatcher.

*2. Given a list of responsibilities, will be able to identify items that are *and are not* responsibilities of the EMT Dispatcher.

EMT Specialist B

Capabilities and Limitations of Local Medical Facilities

By the end of his unit, the trainee will be able to match a list of medical emergencies with the facility best prepared to cope with it, all things equal.

EMT Specialist C

Allocation of Resources

By the end of this unit, the trainee:

1. Given a list of dispatch situations, will be able to determine the appropriate resources to be allocated by considering such factors as the following:

   a. The nature of the problem.

   b. The personnel and vehicles available.

   c. The proximity of vehicles to the patient.

   d. Ambulance zones of coverage.

   e. Type of trained personnel and type of equipment carried by various mobile units.

   f. Caller's assessment of needs.

*Objectives marked with an asterisk should not be deleted in customizing the course.

Figure 2

2. Given a set of emergency situations, will be able to state for each situation whether lights and siren are advisable in traveling to the scene.

3. Given a set of patient conditions, will be able to assign appropriate priority level to each condition.

EMT Specialist D

Providing Emergency Care Instructions

By the end of this unit, the trainee, given a set of situations will be able to decide for each situation what level of medical direction he should provide in a given situation. The factors to be considered will include:

a. How soon is an emergency vehicle likely to arrive?

b. Is the emergency a life-threatening one in which prompt action can alleviate the situation? What are the likely consequences if nothing is done before help arrives?

c. How competent is the caller to administer the needed care?

d. What possible ways could the victim's condition be aggravated?

EMT Specialist E

Practice

*By the end of this unit, the trainee will be able to accomplish all of the objectives for the EMT Specialist Units A through D to an acceptable level of proficiency.

EMT Specialist F

Disaster Procedures

By the end of this unit, the trainee will be able to describe the dispatcher's Civil Defense role in the local community.

*Objectives marked with an asterisk should not be deleted in customizing the course.

Instructor Qualifications

This training program has been designed to be delivered by a single instructor, although additional instructors may be required in some communities. The instructor should be experienced both as a telecommunications operator and as an Emergency Medical Technician. The instructor may have worked as a dispatcher for police, EMS, fire, hospital, Civil Defense, highway maintenance, forestry-conservation, or ambulance service units. The instructor should have satisfactorily completed the U.S. Department of Transportation's Basic Training Program for EMT—Ambulance or equivalent training, but he need not meet the qualifications imposed upon instructors of the latter course. Experience and competence as an instructor would be a desirable characteristic. The instructor should be thoroughly knowledgeable about the dispatching environment that the trainees are preparing to enter (geography, local policies, local jargon, equipment, etc.). The instructor should be totally proficient in the skills he is to convey. A thoroughly qualified instructor will have little or no difficulty in presenting this course when supported by good lesson plans and student study guides.

Student Qualifications

The EMT Dispatcher is a person who is often responsible for the lives of individuals. By arranging for the deployment of appropriate medical resources to the scene of an emergency and arranging for the timely transportation of victims to the care of a physician, he can minimize mortality and the severity of disabling injuries. Therefore, students should have demonstrated a high-level of responsibility and initiative.

Because of the nature of the duties they will have to perform on the job, students should have:

1. Proficiency in reading and writing English and speaking clearly and distinctly.

2. Ability to analyze situations accurately and take or suggest an effective course of action.

Students who take both parts of this course should have satisfactorily completed the U.S. Department of Transportation's Basic Training Program for EMT—Ambulance.

Additional qualifications may be imposed by the state in which the course is given. However, the imposition of requirements that are unrelated to job performance must be avoided. Although most students will have as much general ability as high school graduates, the diploma is not required by the job. Handicapped individuals who are otherwise qualified should not be barred from the course unless their handicap would hamper adequate performance of dispatcher duties.

Class Size

The EMT—Dispatcher course has been designed to maximize participation by the student. Students will be encouraged to ask questions and to annotate their study guides to make them conform to local practices and conditions. The more active a student is in class the better he will learn. Practice exercises have been designed in which students pair off and alternately assume the role of caller and dispatcher. An ideal class size for this sort of instruction is six. However, a class as large as ten could be handled with one instructor and one control console or simulator on which students could practice.

If the class size is an odd number the instructor will pair off with one of the students during the practice exercises. In this way he can provide extra individual attention and tutoring to those who may not be grasping some of the concepts.

Training Resources

Facilities

The recommended facility for this training is a large conference room or small lecture hall in a building that also contains a dispatching center. If this is not feasible, any convenient place of assembly may be used. A school that contains a language laboratory where students could practice voice techniques would also be a desirable site.

The classroom should be well lighted to permit students to take notes and to read the *Student Study Guide* and handouts. The room should have adequate heating and ventilation or air conditioning to assure the comfort of students and instructor.

Each student should have a chair and table or desk at which he can take notes. Seating arrangements should be flexible so that students can pair off for part of their training. When this is not feasible in the normal classroom, additional space must be provided for practicing.

Equipment and Materials

The materials and equipment listed below are vital to the presentation of this course. The course administrator must arrange to procure these items in sufficient quantities to accommodate the intended class size. The list includes:

Chalkboard with chalk or flipchart with grease pencils or felt-tip markers.

Overhead projector and screen.

Tape recorders (stereo)—one for every two students.

Student Study Guide—one for each student.

All reference-type performance aids that graduates of the course would use on the job. This includes such reference sources as locator maps, street directories, and telephone cross-reference files. A complete set for each student to use during practice would be optimal.

Copies of all forms that the graduate dispatcher may have to fill out. Each student should have 25 copies of each form.

In addition the class should have access to a control console to be used during instruction on equipment nomenclature and operation. An out-of-service console would do nicely. If an actual console is unavailable, either an operating or mock-up type simulator must be procured.

Scheduling Considerations

The EMT—Dispatcher training course has been designed to be flexible in its scheduling. It can be presented in as few as two days. However, if the local emergency medical system is a large one and the job conditions are relatively complex, it may take as long as four days to establish adequate proficiency.

The dispatcher's job differs widely from one location to another. A dispatcher may handle emergency services in a small community, an entire state, or a region that covers portions of several states. A dispatcher may have only a telephone and a radio transceiver or he may have to handle many sophisticated pieces of equipment.

The course is adaptable to local job conditions. The instructor or curriculum specialist prepares lectures and modifies existing course materials to convey what local students need to know. The extent of customizing the instructional materials will differ from one location to another. Thus the course length may also differ.

In addition to the amount of customizing required, the length of the course will depend upon:

1. The number of students in a class.
2. The number of consoles or simulators available.
3. The previous related experience of class members.

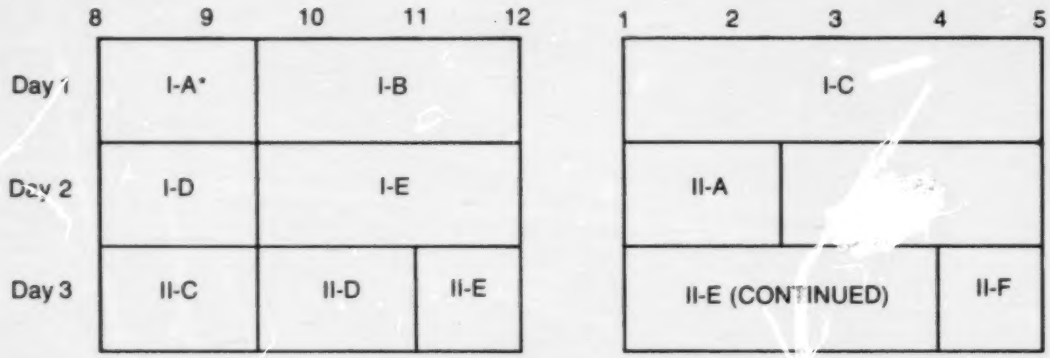
The course should be conducted on consecutive days, if possible. Eight hours of instruction per day are assumed. Most courses will probably be conducted between 8 a.m. and 5 p.m. with an hour out for lunch. In order to be able to schedule equipment demonstrations during slack hours, some courses may have to be conducted between 3 a.m. and 12 noon, with an hour for breakfast.

Figure 3 provides minimum and maximum time estimates for each unit in the course. Figure 4 shows a "typical" schedule reflecting average times for most of the units.

Figure 3. Estimating Minimum and Maximum Instructional Time Requirements

Unit		Hours Estimated Minimum	Hours Estimated Maximum
PART I BASIC DISPATCHER			
I-A	Introduction to Dispatcher Roles and Responsibilities	1	1.5
I-B	Telecommunications Equipment	1.5	3
I-C	Operating Procedures and Techniques	2.5	5
I-D	Eliciting Information From Callers	1	2
I-E	Practice	1	4
PART II EMT DISPATCHER			
II-A	EMT Dispatcher Roles and Responsibilities	1	1.5
II-B	Capabilities and Limitations of Local Medical Facilities	1.5	4
II-C	Allocation of Resources	1.5	3
II-D	Providing Emergency Care Instructions	1.5	3.5
II-E	Practice	1.5	4
II-F	Disaster Procedures	1	1.5

Figure 4. Typical Dispatcher—EMT Training Schedule



*Entries in cells are Units (e.g., I-B = Unit B of Part I).

The means by which dispatcher functions are accomplished varies significantly from region to region and from center to center within a region. Thus, the training structure in this *Course Guide* needs to be customized to satisfy specific local requirements.

Two types of customizing will be required before the course is administered. First, the scope of the course must be reviewed to ensure it contains only materials appropriate to the intended audience. Some segments of the training materials may be inappropriate as presented in this *Course Guide*. The inappropriate segment may be an objective or an entire unit. For example, if the students taking the course will never have to provide emergency care instructions, the entire unit (II-D) dealing with this topic and all objectives subsumed under that unit would be deleted.

Second, several of the units cover conditions that are unique to each location and thus require specific materials to be developed for them. These points are clearly indicated in the *Instructor Lesson Plans*.

To understand the adaptation process recommended herein, it is useful to understand the underlying structure of the training course. The structure and content of this course is such that the students receive training in what they need to know, and classroom time is not devoted to superfluous information or to practicing superfluous skills. This is because the entire course has been derived from the four major functions performed by dispatchers in the Emergency Medical System and the actions required to accomplish each one. The functions are:

A. Receive and process calls for assistance.

B. Dispatch and coordinate EMS resources.

C. Relay medical information.

D. Coordinate with public safety services.

One or more of the course objectives (see Figure 2) is associated with each of the actions required to accomplish the functions. The objectives are grouped into an optimal sequence of units of instruction. Thus, each course objective is directly related to job actions and to dispatcher functions.

Choosing Appropriate Content

To determine whether any of the course structure is locally inappropriate, the administrator should first review the course units (Figure 2). If all of these units are appropriate to the duties of the course graduate, the specific objectives within the units (also, Figure 2) should be examined for local relevance. However, if one of the units does not require course coverage, then all of its related objectives should be deleted.

It is important to note that asterisked (*) objectives in Figure 2 should *always* be taught. These asterisked objectives represent broad (or pervasive) background skills or knowledges which apply across many units. Thus, students must learn these objectives whether or not they are responsible for the specific unit in which an asterisked objective happens to fall.

Finally, it is possible that the entire course structure described herein needs to be conveyed, except for one or two isolated objectives. These, then, may be deleted before the remainder of the course is customized. Of course, the length and scheduling of the course will be affected by any deletions.

Augmenting the Course Content

As previously mentioned, the job of EMT—Dispatcher differs widely from one location to another. Thus, a course presented in one state, for example, may present misinformation if administered to dispatcher trainees in another state. Even though basic methodologies, voice techniques, telecommunications principles, and strategies of resource allocation have broad applicability, there will always be local policies, laws, equipment, procedures, and geography which need to be conveyed individually at each training center. For specific details of the points at which local course content may need to be prepared, the reader should consult the *Instructor Lesson Plans*. A qualified local instructor or committee of local instructors will have little or no difficulty in customizing the course at the points indicated in the *Instructor Lesson Plans*.

Monitoring/Evaluating the Course[3]

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An important function in the administration of this course is quality control. Training personnel should have as their primary goal producing graduate dispatchers who can successfully perform their job. Everything they do should be directed toward this goal. Even under good conditions, however, the course may not be presented as originally conceived and planned. Therefore, training personnel should be informed that the EMT—Dispatcher training program will be evaluated to detect and correct situations which detract from achievement of the primary goal. All of these individuals should be fully aware that evaluation is a *positive process*; that it is the only way of providing needed feedback to insure the continuing high quality of course graduates.

For purposes of this course, two general types of evaluation are appropriate. The first of these, internal evaluation, is also called a "course review." This form of evaluation focuses only on the characteristics of the course itself. An internal evaluation will identify some of the problems with the components of the course or its administration, and suggest where improvements should be made. Field evaluation completes the picture. Field evaluation determines what the graduate dispatcher does in his field assignment and how well he is performing his job. The results of both forms of evaluation are used to determine better ways for achieving the primary goal of preparing good dispatchers.

The following discussion of internal and field evaluation is a general-level presentation of an *optimal* process for improving the quality of instruction. Given real-world constraints of time and resources, it may be impractical to accomplish all aspects of the process. Nevertheless, it is desirable to strive to achieve as much of the process as possible. The better the quality control program, the more efficient and effective the EMT—Dispatcher program will be.

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[3]Many passages in this section of the *Course Guide* are paraphrased from Volume V. of:

Schumacher, S. P., & Glasgow, Z. A. *Handbook for Designers of Instructional Systems (5 volumes)*. Valencia, Pa.: Applied Science Associates, Inc., March 1974. Also published by U.S. Department of the Air Force. AFP 50-58, January 1974.

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Internal Evaluation

Internal evaluation will help to identify specific causes of instructional failure, i.e., the reasons why trainees fail to achieve satisfactory performance during the course. Some possible causes of such failure include:

1. The instructor's activities don't conform to the lesson plans.
2. Resources, facilities, or materials are inadequate.
3. The trainees do not satisfy the student selection requirements specified in this *Course Guide*.
4. Locally developed practice exercises are not sufficiently comprehensive or representative.
5. Student/instructor ratio is too high.
6. Instructor is not well qualified to teach this course.
7. Course objectives were too difficult to achieve in the time allotted.

The purposes of the internal evaluation are to isolate the causes of instructional problems and to gather sufficient data to decide how to alleviate the problem. The internal evaluation process for gathering sufficient data and isolating the problem starts with an analysis of the course planning and control documents (course guide, schedule, lesson plans, etc.). Then each component and procedure authorized and/or required by these documents is studied to see that it conforms to the control document specification. Discrepancies between the planned course and what occurs during the actual training program might be found in any of the following:

1. **Resources.** This *Course Guide* and the *Instructor Lesson Plans* indicate the requirement for specific training facilities, equipment, tools, and supplies in order for the course to accomplish the stated objectives. The internal evaluation will determine whether such facilities and services are adequate. When deficiencies are found corrective action should be recommended.
2. **Classroom Facilities and Conditions.** Control documents and a specification of existing resources may not provide sufficient information for the internal evaluation. Classroom visits of sufficient length and frequency to ensure representative sampling are useful. Specified trainers, media, and aids should be checked for condition, operation, and appropriateness. Also the instructional supporting documents, including the lesson plans and study guides, should be checked for availability and quality.
3. **Instructors.** It is also important to determine that the instructors' activities conform to those specified in the lesson plans. Instructors must show acceptable application of sound instructional techniques. They must be able to detect student problems, and react to student needs. Required instructor records must be current.

4. **The Measurement (Testing) Program.** The most important element of the internal evaluation is an examination of student performance on the end-of-unit tests. A satisfactory measurement program should:

   a. Provide students and instructors with goals.

   b. Inform each student of his progress in meeting program objectives.

   c. Establish a permanent record of each student's achievement, and make it available to the student.

   d. Identify any need for a remedial program.

   e. Identify the course objectives not met by individual students.

   f. Provide feedback to establish a constant quality-control check on the entire program.

Field Evaluation

It is possible for a training program to satisfy the internal evaluation criteria while failing to achieve its primary objective of training dispatchers to perform on the job satisfactorily. Reasons include:

1. The "customizing" process was not handled adequately; e.g., training units necessary to establish good job performance were deleted during the customizing process.

2. The job requirements changed after the course was developed, or were incorrectly identified in the first place.

3. The graduates are not sufficiently motivated by the job itself to perform it satisfactorily. That is, their performance on the job might stay at the same level, or degrade over a period of time, rather than improve.

Field evaluation is absolutely essential even when the internal evaluation and end-of-unit test performance are satisfactory. It is still necessary to ascertain that the job requirements are being adequately accomplished by the EMT—Dispatcher graduates. Supervisors' and graduates' opinions of how well the training program prepares students to be dispatchers should also be determined. Their suggestions for improvements are often invaluable.

The four primary methods of collecting field evaluation data are: Questionnaires, observing the graduate on the job, interviewing the graduate, and interviewing the graduate's supervisor.

1. **Questionnaires.** The use of questionnaires is the least expensive procedure for field evaluation. They may yield a large amount of data from large samples of graduates. However, the data obtained by mail questionnaires tends to reflect how it was prepared and distributed. Questionnaires must be carefully prepared, properly distributed, objectively executed, and critically analyzed. When properly handled, evaluation by questionnaires can provide constructive information on:

    a. The ability of recent graduates to perform specific dispatching duties.

    b. The specific nature of instructional deficiencies, as seen by the graduates.

    c. Details of the jobs actually being performed by the graduates.

    d. Instruction not needed by the graduates in their jobs.

2. **Observing the Graduate.** Watching graduates perform can provide some indication of their proficiency. However, observers should be technically qualified to evaluate the dispatcher's performance. Notes should be made detailing which duties are performed, unusual situations, and problems encountered. The graduate's attitude should be noted if it appears attitude might have an impact on job performance.

3. **Interviewing the Graduates.** Whether or not graduates are observed on the job, a representative sample should be interviewed three to six months after they are assigned to the job. If necessary, telephone interviews may be used. Dispatchers should be interviewed to obtain background information and to get their ideas of how well the training prepared them for their present assignments. A preplanned list of questions designed to get honest, pertinent answers should be used.

4. **Interviewing the Supervisor.** Dispatchers' supervisors should also be contacted. They have had the opportunity to observe the graduates' performance over a long period of time. Their appraisal is significant and valuable. The focus of the interview with the individual supervisors should be on determining the dispatcher's proficiency. It is also important to determine how the dispatcher's skills are being utilized and how well he is progressing through on-the-job training. A list of questions should be prepared and used as a guide when conducting the interviews.

Summary

Analysis of the internal and field evaluation data will bring out strengths and weaknesses in the dispatcher training program. All training programs have weaknesses. The aim of quality-control measures is not to create a perfect training system. Rather, it should focus the decision makers' attention on those problems which directly compromise the goal of preparing dispatchers to perform their job. Good evaluation will assure a steady flow of timely, pertinent data for maintaining both quality and cost-effectiveness of the EMT—Dispatcher course.

Bibliography

1. Associated Public-Safety Communications Officers, Inc. *The Public Safety Communications Standard Operating Procedure Manual.* New Smyrna Beach, Florida: Author, November 1974.

2. McMillian, J. R., Jr. *An Aural Brevity Code for Public Safety Communications.* New Smyrna Beach, Florida: Associated Public-Safety Communications Officers, Inc., April 1974. Developed under Contract No. OTP-SE-73-113, Office of Telecommunications Policy.

3. Office of Telecommunications Policy, Executive Office of the President. *Nine-One-One/The Emergency Telephone Number.* Washington, D.C.: U.S. Government Printing Office, May 1973. Stock No.: 2205–0003.

4. Schumacher, S.P., & Glasgow, Z.A. *Handbook for Designers of Instructional Systems (5 volumes).* Valencia, Pa.: Applied Science Associates, Inc., March 1974. Also published by U.S. Department of the Air Force. AFP 50–58, January 1974.

5. U.S. Department of Transportation, National Highway Traffic Safety Administration. *Dispatcher, Emergency Medical Technician, Training Course.* Washington, D.C.: Author, November 1972. DOT-HS-810224.

6. U.S. Department of Transportation, National Highway Traffic Safety Administration. *Basic Training Program for Emergency Medical Technician—Ambulance. Course Guide and Course Coordinator Orientation Program.* Washington, D.C.: Author, January 1971.

7. U.S. Department of Transportation, National Highway Traffic Safety Administration. *Basic Training Program for Emergency Medical Technician—Ambulance. Instructor's Lesson Plans.* Washington, D.C.: Author, January 1971.

Appendix 23

Course Content Outline for Basic EMT—Ambulance Course

LESSON

1. The Emergency Medical Technican (EMT)—his role, responsibilities, and equipment.
2. Airway obstruction and pulmonary arrest.
3. Mechanical aids to breathing and pulmonary resuscitation.
4. Cardiac arrest.
5. Bleeding, shock, and practice on airway care; pulmonary resuscitation and cardiopulmonary resuscitation.
6. Practice, test, and evaluation—airway care, pulmonary arrest, cardiac arrest, bleeding, and shock.
7. Wounds.
8. Fractures of the upper extremity.
9. Fractures of the lower extremity.
10. Injuries of the head, face, neck and spine.
11. Injuries to the eye, chest, abdomen, pelvis, genitalia.
12. Practice test, and evaluation—injuries I.
13. Practice, test and evaluation—injuries II.
14. Medical emergencies—I.
15. Medical emergencies —II.
16. Childbirth and problems of child patients.
17. Lifting and moving patients.
18. Practice, test, and evaluation—medical emergencies, emergency childbirth, lifting and moving.
19. Environmental emergencies.
20. Extrication from automobiles.

21. Operations—driving an emergency vehicle, maintaining a safe and ready vehicle, records and reports, communications, and procedures at hospital emergency rooms.

22. Responding to an ambulance call.

23. Situational review.

24. Final written test.

25. Final practical evaluation of skills.

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